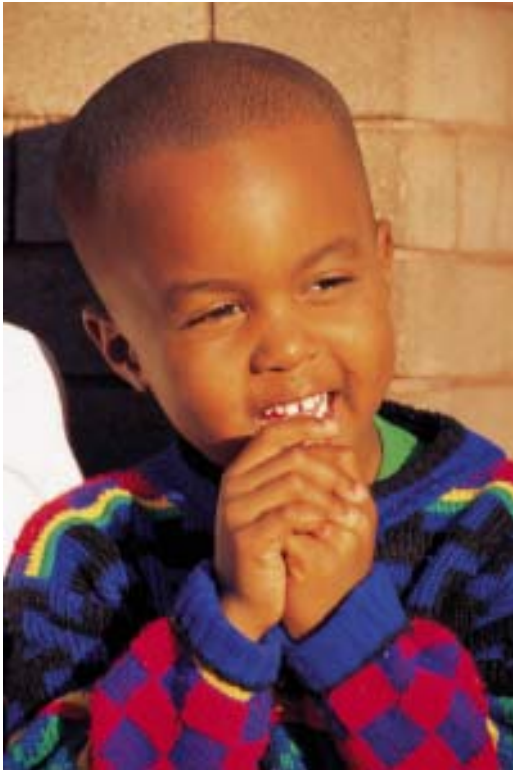


HEMOGLOBIN C TRAIT



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If you have been told as a result of blood tests that your child is a hemoglobin C carrier, that is, he or she has hemoglobin C trait, quite naturally you are concerned.

Questions are tumbling through your head. “What does it mean?” “Is the baby sick?” “Can it develop into sickle cell disease?” “Can other members of my family get it?”

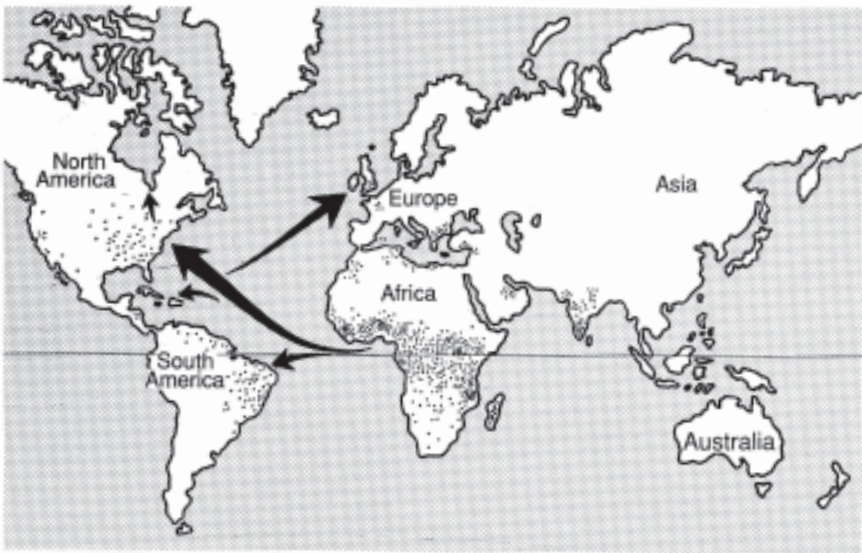
YOUR BABY IS NOT SICK

Let us assure you that being a hemoglobin C carrier will not affect your baby’s health. Even though your hemoglobin C carrier baby is healthy, you and your mate may want to be tested in the future, if you want to know your chances of having an affected child with your next pregnancy.

Your baby does not have a disease and hemoglobin C will not turn into a disease !!

You are not alone

In this country, almost 3 million people are carriers of changed or altered hemoglobins (S, C, E and many others). In the United states, hemoglobin C is the second most common altered hemoglobin next to hemoglobin S. It is found primarily in African Americans with descendants from West Africa. Approximately 2 - 3% of African Americans are hemoglobin C carriers.



A carrier with a changed hemoglobin such as AS, AC or AE who has a child with a hemoglobin AS carrier, can produce a child with sickle cell disease. There are other diseases in which 2 carriers can have a child with a disease. Cystic fibrosis, which affects primarily Caucasians, tay-sachs affecting Jewish people and beta-thalassemia (Cooley's anemia) affecting Italians and Greeks, are examples of such diseases.

How did my baby become a carrier?

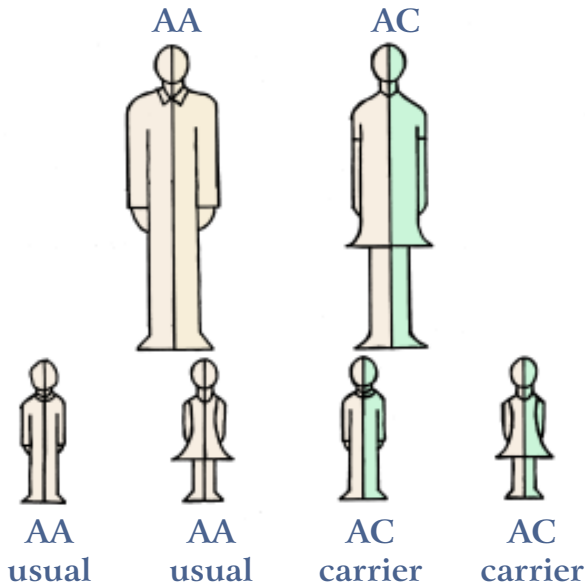
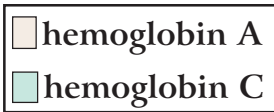
You are probably wondering how your baby became a hemoglobin C carrier. Well, like hair color, general body build and other physical characteristics, this was inherited; it was passed down in the family from parent to child through the genes. Genes are tiny bits of information contained in the father's sperm and the mother's egg that form a "blueprint" for the new life.



The hemoglobin C gene is passed down from generation to generation.

Genes come in pairs; for each characteristic there is one gene from the mother and one from the father. One pair of genes determines hemoglobin - the substance that carries oxygen in your blood and gives it a red color. If your baby is a hemoglobin C carrier, it means that your baby inherited the usual hemoglobin gene from one parent and one changed or altered gene from the other parent. We refer to the usual gene as hemoglobin A and the changed gene as hemoglobin C. This combination of genes does not cause a disease.

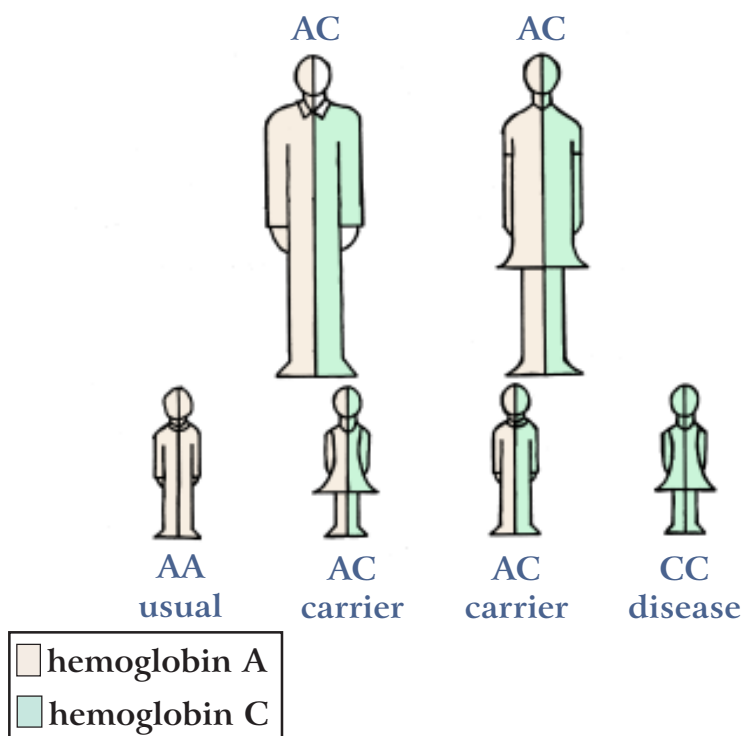
If one parent has hemoglobin AC and the other has hemoglobin AA



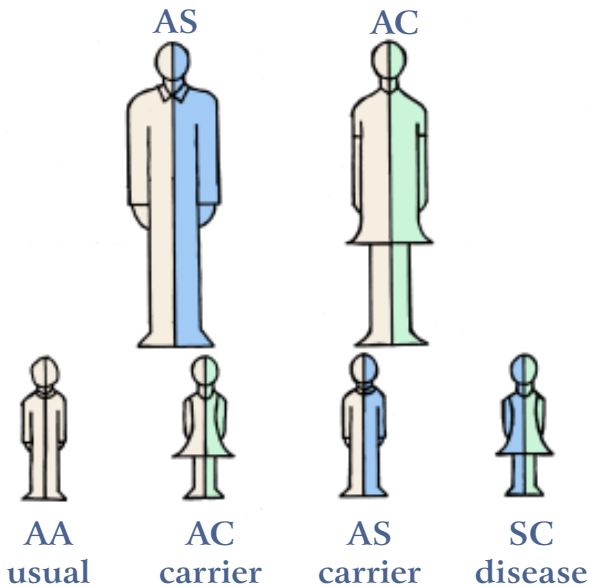
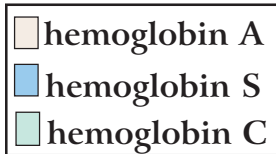
For each pregnancy there is a 2 out of 4 (50%) chance that the child will inherit hemoglobin AC and be a hemoglobin C carrier and a 2 out of 4 (50%) chance that the child will have the usual hemoglobin AA.

If both parents have hemoglobin AC

For each pregnancy there is a 1 out of 4 (25%) chance that the child will inherit the usual hemoglobin AA, a 2 out of 4 chance (50%) chance of inheriting the carrier state hemoglobin AC and a 1 out of 4 (25%) chance of inheriting hemoglobin CC disease. Persons with hemoglobin C disorder (CC) may have mild health problems and may need to be under a doctor's care.



If one parent has hemoglobin AS and the other has hemoglobin AC



For each pregnancy there is a 1 out of 4 (25%) chance that the child will inherit hemoglobin AC and be a hemoglobin C carrier and a 1 out of 4 (25%) chance that the child will have the usual hemoglobin AA. There is also a 1 out of 4 chance (25%) that the child will inherit hemoglobin AS and be a hemoglobin S carrier and a 1 out of 4 chance (25%) that the child will inherit hemoglobin SC, a form of sickle cell disease. Persons with hemoglobin SC have a serious disease and must be under a doctor's care.



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